

REMARKS

Claims 1-5 are pending. By this response claims 1, 4 and 5 have been amended.

In the Office Action dated February 23, 2007, the Examiner:
rejected claims 1-5 under 35 USC § 102(a) as being anticipated by Yajima (US 6,238,576).

Applicant has amended claims 1, 4 and 5 to clarify the invention.

As an initial matter, Applicant brings to the Examiner's attention, as shown in the drawings of the present application, that the liquid tank is connected to the primary side of the pump, and the filter is connected to the secondary side of the pump. In contrast, in Yajima the filter is located between the liquid tank and the pump, such that the filter is connected to the primary side of the pump.

Claim 1:

Amended claim 1 is directed to a chemical liquid supply apparatus and recites, a pump discharging a liquid accommodated in a liquid tank, a filter provided with a pump discharge-side valve and connected to said pump through a pump outlet flow path opened/closed by said pump discharge-side valve, a liquid discharge portion provided with a discharge valve and connected to said filter through a liquid discharge flow path opened/closed by said discharge valve, and a vacuum source provided with a deaeration valve and communicating with said filter through an exhaust flow path opened/closed by said deaeration valve. Thus, claim 1 as amended, clarifies that the vacuum source is provided with a deaeration valve and that the liquid discharge portion is provided with a discharge valve.

Claim 1 recites a pump, a filter and a vacuum source. In the Office Action, page 2, the Examiner asserts that Yajima discloses a vacuum source 15a. However, the reference numeral "15a" shows the pump inlet (see col. 6, line 64

and Fig. 3). Applicant respectfully submits that a pump inlet is not a vacuum source, and thus Yajima does not disclose a vacuum source.

Further, in FIG. 5B, Yajima discloses an exhausting operation, wherein "the pump chamber 17 is contracted" so that the air captured in the filter is exhausted by such an exhausting operation (col. 9, line 8-20). As clearly disclosed in the figures of Yajima, the exhaust flow path 51 is opened to the atmosphere. In Yajima the exhaust flow path 51 is not connected to a vacuum source. Applicant wishes to emphasize that this is an important distinction between Yajima and the present invention.

Even further, in Fig. 5(B), which shows the exhausting operation in Yajima, "the pump chamber 17 is contracted." In other words, Yajima discloses that it is the pump that performs the exhaust operation. Namely, the exhausting operation is operated by "positive pressure," which is opposite to vacuum. Applicant wishes to emphasize that this is another important distinction between Yajima and the present invention.

Applicant submits that claim 1 requires that the vacuum source is provided with a deaeration valve which opens/closes the exhaust flow path. The Examiner has indicated that valve V2 of Yajima is a deaeration valve and path 51 is the exhaust flow path. Valve V2 is downstream of Yajima's filter 41 and not located adjacent to pump 11. Therefore, even if, *arguendo*, the pump inlet 15a of Yajima was to be considered to be a vacuum source (which Applicant disputes), Yajima fails to disclose that a vacuum source is provided with valve V2.

Further, Applicant disagrees with the Examiner's characterization of valve V1 as the claimed discharge valve. Claim 1 requires that a liquid discharge portion is provided with a discharge valve and connected to the filter through a liquid discharge flow path opened/closed by the discharge valve. Thus, claim 1 defines a liquid discharge flow path as connecting the liquid discharge portion to the filter. Claim 1 further defines the discharge valve as opening/closing the liquid discharge flow path. The Examiner recognizes that nozzle 50 of Yajima is

a liquid discharge portion. The Examiner then refers to FIG. 6B and its “feedback operation” to characterize valve V1 as being a “valve capable of being a discharge valve.” However, Yajima’s feedback operation allows liquid in the pump chamber 17 to be returned on the side of the liquid introducing flow path 42 (col. 9, lines 50-52) via flow paths 42 and 53 (see FIG. 6B). Neither Yajima’s flow path 42 nor flow path 53 connect the filter 41 to the liquid discharge portion 50. Thus, neither flow path 42 nor 53 could be considered to be the claimed liquid discharge flow path. In other words, neither flow path 42 nor flow path 53 connects the liquid discharge portion 50 to the filter 41. Therefore, Yajima’s valve V1, which is located on flow path 42 cannot be considered to be the discharge valve as defined by claim 1, as claim 1 requires that the liquid discharge flow path is opened/closed by the discharge valve.

Claim 4:

Amended claim 4 is directed to a deaerating method of a chemical liquid supply apparatus having a pump discharging a liquid accommodated in a liquid tank; a filter connected to said pump through a pump outlet flow path provided with a pump discharge-side valve and opened/closed by said pump discharge-side valve; and a liquid discharge portion connected to said filter through a liquid discharge flow path provided with a discharge valve and opened/closed by said discharge valve, and discharging the liquid in said liquid tank from said liquid discharge portion. The deaerating method includes a deaerating process of, under such a state that a vacuum source connected to said filter through an exhaust flow path is operated, opening a deaeration valve provided to said exhaust flow path and closing said pump discharge-side valve and said discharge valve to exhaust a gas inside said filter to said exhaust flow path.

The Examiner asserts that Yajima discloses filter 41 connected to pump 11/17 through a pump outlet flow path 53 to which a pump discharge-side valve V5 for opening/closing the flow path is provided. The Examiner further asserts that FIG. 5B of Yajima discloses opening a deaeration valve V2 provided to an exhaust flow path 51 and closing the pump discharge-side valve V5 and the valve capable of being a discharge valve V1.

Applicant disagrees with the Examiner's characterization of valve V5 of Yajima as a pump discharge-side valve as defined by claim 4. Claim 4 requires that a filter is connected to the pump through a pump outlet flow path provided with a pump discharge-side valve and opened/closed by the pump discharge-side valve. Thus, claim 4 requires that the pump outlet flow path runs from the pump to the filter and that this path is opened/closed by the pump discharge-side valve. Valve V5 of Yajima is not included in any flow path that runs from the pump to the filter. Thus, valve V5 of Yajima cannot be considered to be the pump discharge-side valve as recited in claim 4. Additionally, were the Examiner to revert to his understanding with respect to claim 1 that Yajima's valve V4 is the pump discharge-side valve, Applicant notes that FIG. 5B of Yajima shows that valve V4 is open.

Further, as discussed above with respect to claim 1, Applicant disagrees that Yajima discloses a vacuum source. Also, as discussed above, Applicant disagrees that Yajima's valve V1 is a discharge valve as claimed.

Claim 5:

Amended claim 5 is directed to a deaerating method of a chemical liquid supply apparatus having a pump discharging a liquid by communicating with the liquid accommodated in a liquid tank through a liquid introduction flow path to which a pump inlet-side valve for opening/closing the flow path is provided, a filter connected to said pump through a pump outlet flow path provided with a pump discharge-side valve and opened/closed by said pump discharge-side valve, and a liquid dispense portion connected to said filter through a liquid discharge flow path provided with a discharge valve and opened/closed by said discharge valve, and dispensing the liquid in said liquid tank from said liquid dispense portion. The deaerating method includes performing a sucking operation of said pump under such a state that a deaeration valve provided to an exhaust flow path communicating with an inlet side of said filter, said pump inlet-side valve, and said discharge valve are closed and that said pump discharge-side valve is opened, and performing a discharging operation of said pump under such a state that said deaeration valve

and said pump discharge-side valve are opened and that said pump inlet-side valve and said discharge valve are closed.

The Examiner refers to Yajima's FIG. 4C to assert that Yajima discloses the sucking operation of claim 5. Specifically the Examiner asserts that a deaeration valve V2 is closed, a pump inlet-side valve V3 is closed, a "valve capable of being a discharge valve V1" is closed and a pump discharge-side valve V5 is opened. As above, Applicant respectfully submits that Yajima's valve V1 cannot be considered to the claimed discharge valve. Further, as discussed above, Applicant submits that Yajima's valve V5 cannot be considered to the claimed pump discharge-side valve. The claimed pump discharge-side valve opens and closes a flow path between a pump and a filter. Yajima's valve V5 does not open or close a flow path between a pump and a filter.

The Examiner refers to Yajima's FIG. 4B to assert that Yajima discloses the discharging operation of claim 5. Specifically the Examiner asserts that a deaeration valve V2 and a pump discharge-side valve V5 are opened and a pump inlet-side valve V3 and a "valve capable of being a discharge valve V1" are closed. Applicants disagree and, as an initial matter, note that none of the figures of Yajima disclose both valve V2 and valve V5 open. As above, Applicant respectfully submits that Yajima's valve V1 cannot be considered to the claimed discharge valve. Further, as discussed above, Applicant submits that Yajima's valve V5 cannot be considered to the claimed pump discharge-side valve.

Applicant respectfully submits that Yajima fails to disclose each and every element of claims 1, 4 and 5, and thus, Yajima fails to anticipate claims 1, 4 and 5. Claims 2 and 3 depend from claim 1 and contain additional recitations thereto. For at least all of the above reasons, Applicant submits that Yajima also fails to anticipate claims 2 and 3.

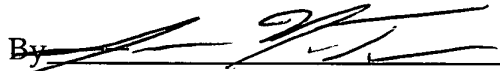
Drawings:

In the Drawings, specifically in FIGS. 2B and 10B, Applicant has corrected typographical errors—the word "operation" was misspelled in both of these

figures.

Applicant believes that no additional fees are due in connection with this Amendment and Response. If any additional fees are deemed necessary, authorization is hereby given to charge any such fees to Deposit Account No. 13-0235.

Respectfully submitted,

By 
Jeanne M. Tanner
Registration No. 45,156
Attorney for Applicant

McCormick, Paulding & Huber LLP
CityPlace II, 185 Asylum Street
Hartford, CT 06103-3402
(860) 549-5290